

AMENDMENTS TO THE ABSTRACT

Please amend the Abstract as follows:

ABSTRACT ABSTRACT

A thin polarizer array and a wavelength plate array that are composed of micro regions having different optical axis directions and wavelength characteristics and ~~have~~ having a high extinction ratio and a low insertion loss, and a polarization analyzer using them ~~are disclosed~~. An array of micro periodic grooves is formed on a substrate, with the directions changed from one region to another. An alternating multilayer film formed by bias sputtering alternating a layer of high refractive index material such as Si or ~~Ta₂O₅~~ Ta₂O₅ and a layer of low refractive index material such as SiO₂ ~~SiO₂ is formed by bias sputtering~~. By selecting a condition that each layer maintains its periodic projecting/recessed shape, an array of photonic crystal polarizer is formed. By mounting this array of photonic crystal polarizer in a photodetector array, a polarization analyzer that is small, has no movable part, ~~is composed of~~ has a small number of components, and enables high-precision measurement is constituted.